

IN THE CLAIMS:

1 1. (CANCELLED)

1 2. (Previously Presented): The method of claim 7, wherein the set of data further com-
2 prises:

3 a unique identification of one of the devices; and
4 an address of the one of the devices.

1 3. (Previously Presented): The method of claim 7, wherein the unique identification of
2 one of the devices further comprises a unique serial number of the device.

1 4. (Previously Presented): The method of claim 7, wherein the address of one of the de-
2 vices further comprises a fully qualified network address.

1 5. (CANCELLED)

1 6. (CANCELLED)

1 7. (Currently Amended): A method for storing and distributing data in a network storage
2 system having a plurality of devices interconnected with one or more switches, the
3 method comprising ~~the steps of~~:

4 writing, by one of the plurality of devices, a set of data to a memory associated
5 with a port of one of the one or more switches, the memory being readable by all of the
6 plurality of devices;

7 reading, by one of the plurality of devices, the set of data from the memory;

8 including in the set of data identification of one or more disks that are offline and
9 inaccessible to any of the plurality of devices; and

10 including in the set of data a disk identification string, the disk identification
11 string indicating a name of a switch, a port number on the switch, and a disk number.

1 8. (Previously Presented): The method of claim 7, wherein the memory associated with
2 a port further comprises a Symbolic Port Name field.

1 9. (CANCELLED)

1 10. (Previously Presented): The network storage system of claim 13, wherein the set of
2 data further comprises:

3 a unique identification of one of the devices; and
4 an address of the one of the devices.

1 11. (Previously Presented): The network storage system of claim 10, wherein the
2 unique identification of one of the devices further comprises an unique serial number.

1 12. (Previously Presented): The network storage system of claim 10, wherein the ad-
2 dress further comprises a fully qualified network address.

1 13. (Previously Presented): A network storage system comprising:

2 one or more switches having a plurality of ports, each switch having a memory
3 associated with the port;

4 a plurality of file servers interconnected with the one or more switches;

5 a plurality of disks, each disk of the plurality of disks connected to at least one of
6 the one or more switches; and
7

1 a fabric management layer configured to include in the set of data identification of
2 one or more disks that are offline and inaccessible to any of the plurality of devices and
3 further configured to include in the set of data a disk identification string for each disk,

4 the disk identification string indicating a name of a switch, a port number on the switch,
5 and a disk number.

1 14. (Previously Presented): The network storage system of claim 13, wherein the plural-
2 ity of switches comprise fibre channel switches operatively interconnected to define a
3 switching fabric.

1 15. (Previously Presented): The network storage system of claim 13, wherein the mem-
2 ory associated with the port further comprises a Symbolic Port Name field.

1 16. (Currently Amended): A computer-readable medium, including program instructions
2 executing on a file server, for storing and distributing data in a network storage system,
3 the program instructions performing comprising the steps of:

1 writing, by one of a plurality of devices, a set of data to a memory associated with
2 a port of a switch, the memory being readable by all of the plurality of devices;

3 reading, by one of the plurality of devices, the set of data from the memory;

4 including in the set of data identification of one or more disks that are offline and
5 inaccessible to any of the plurality of devices; and

6 including in the set of data a disk identification string for each disk, the disk iden-
7 tification string indicating a name of a switch, a port number on the switch, and a disk
8 number.

1 17-36 (CANCELLED)

1 37. (Previously Presented): The method of claim 7, further comprising:
2 using as one of the plurality of devices a filer.

1 38. (Previously Presented): The method of claim 7, further comprising:
2 using as one of the plurality of devices a disk.

1 39. (Previously Presented): The network storage system of claim 13, wherein one of the
2 plurality of devices is a filer.

1 40. (Previously Presented): The network storage system of claim 13, wherein one of the
2 plurality of devices a disk.

1 41. (Currently Amended): A method for storing and distributing data in a network stor-
2 age system having a plurality of devices interconnected with a switch, the method com-
3 prising ~~the steps of~~:
4 writing, by a first one of the plurality of devices, a set of data into a port memory
5 associated with a port of the switch;
6 including in the set of data a disk identification string, the disk identification
7 string indicating a name of a switch, a port number on the switch, a disk number, and a
8 status of the disk; and
9 reading by a second one of the plurality of devices the set of data from the port
10 memory to determine the status of the disk.

1 42. (Previously Presented): The method of claim 41, wherein the plurality of devices
2 comprises:
3 a plurality of filers.

1 43. (Previously Presented): The method of claim 42, further comprising:
1 reading, by a second filer of the plurality of filers when a first filer goes offline
2 and in response to the disk identification string written by the first filer, the disks ac-
3 cessed by the first filer.

1 44. (Previously Presented): The method of claim 43, further comprising:
2 determining, by a filer of the plurality of filers, if a disk has gone offline.

1 45. (Previously Presented): The method of claim 41, further comprising:
1 writing disk identification information into the port memory upon boot-up of a
2 device of the plurality of devices, and the port memory accessible to being read by a
3 processor in the switch.

1 46 – 50. (CANCELLED)

1 51. (Currently Amended): An apparatus for storing and distributing data in a network
2 storage system having a plurality of devices interconnected with a switch, the method
3 comprising ~~the steps of~~:
4 means for writing, by a first one of the plurality of devices, a set of data into a
5 port memory associated with a port of the switch;
6 means for including in the set of data a disk identification string, the disk identifi-
7 cation string indicating a name of a switch, a port number on the switch, a disk number,
8 and a status of the disk; and
9 means for reading by a second one of the plurality of devices the set of data from
10 the port memory to determine the status of the disk.

1 52. (Previously Presented): The apparatus of claim 51, wherein the plurality of devices
2 comprises:
3 a plurality of filers.

1 53. (Previously Presented): The apparatus of claim 52, further comprising:
1 means for reading, by a second filer of the plurality of filers when a first filer goes
2 offline and in response to the disk identification string written by the first filer, the disks
3 accessed by the first filer.

1 54. (Previously Presented): The apparatus of claim 52, further comprising:

2 means for determining, by a filer of the plurality of filers, if a disk has gone off-
3 line.

1 55. (Previously Presented): The apparatus of claim 51, further comprising:

2 means for writing disk identification information into the port memory upon boot-
3 up of a device of the plurality of devices, and the port memory accessible to being read
4 by a processor in the switch.

1 56. (Previously Presented): A computer readable media, comprising:

2 said computer readable media containing instructions for execution on a processor
3 for the practice of a method for operating a plurality of devices interconnected with a
4 switch, comprising:

5 writing, by a first one of the plurality of devices, a set of data into a port memory
6 associated with a port of the switch; and

7 including in the set of data a disk identification string, the disk identification
8 string indicating a name of a switch, a port number on the switch, a disk number, and a
9 status of the disk; and

10 reading by a second one of the plurality of devices the set of data from the port
11 memory to determine the status of the disk.

1 57. (CANCELLED)

1 58. (Previously Presented): A method for distributing data in a network storage system
2 having at least one storage device interconnected with a switch, the switch also intercon-
3 nected to a plurality of servers, the method comprising:

4 associating a first server of the plurality of servers with the storage device;

5 writing, by the first server, a set of data to a switch port memory of the switch, the
6 set of data including at least an identification of the storage device;

7 in response to the first server detecting a change in state of the storage device,
8 updating the set of data to include an indication of the change in state;
9 alerting a second server of the plurality of servers that the contents of the switch
10 port memory have changed; and
11 in response to the alerting, reading the set of data from the switch port memory by
12 a second server, the second server thereby informed of the change in state of the storage
13 device.

1 59. (Previously Presented): The method of claim 58 wherein the switch port memory is
2 associated with a port of the switch to which the storage device is interconnected.

1 60. (Previously Presented): The method of claim 58 wherein the change in state is the
2 storage device becoming inaccessible.

1 61. (Previously Presented): The method of claim 58 wherein the step of alerting further
2 comprises;
3 generating a fabric event notification by the switch.

1 62. (Previously Presented): The method of claim 58 wherein the switch port memory
2 further comprises a Symbolic Port Name field.

1 63. (Previously Presented): The method of claim 58 wherein the identification further
2 comprises a Fibre Channel World Wide Name of the storage device.

1 64. (Previously Presented): The method of claim 58 wherein the identification further
2 comprises a name of the switch, a port number on the switch, and a number of the storage
3 device.

1 65. (Previously Presented): A network storage system comprising:
2 a storage device associated with a first server of the plurality of servers, the stor-
3 age device and the first server interconnected to ports of a switch;
4 a switch port memory of the switch, the switch port memory configured to store a
5 set of data including at least an identification of the storage device; and
6 a fabric management layer configured to detect a change in state of the storage
7 device and update the set of data to include an indication of the change in state, the fabric
8 management layer further configured to alert a second server of the plurality of servers
9 that the contents of the switch port memory have changed, the second server configured
10 to read the set of data from the switch port memory to thereby be informed of the change
11 in state of the storage device.

1 66. (Previously Presented): The network storage system of claim 65 wherein the switch
2 port memory is associated with a port of the switch on which the storage device is inter-
3 connected.

1 66. (Previously Presented): The network storage system of claim 65 wherein the change
2 in state is the storage device becoming inaccessible.

1 67. (Previously Presented): The network storage system of claim 65 wherein the switch
2 port memory further comprises a Symbolic Port Name field.

1 68. (Previously Presented): The network storage system of claim 65 wherein the identi-
2 fication further comprises a Fibre Channel World Wide Name of the storage device.

1 69. (Previously Presented): The network storage system of claim 65 wherein the identi-
2 fication further comprises a name of the switch, a port number on the switch, and a num-
3 ber of the storage device.

1 70. (Previously Presented): A network storage system having at least one storage device
2 interconnected with a switch, the switch also interconnected to a plurality of servers, the
3 network storage system comprising:

4 means for associating a first server of the plurality of servers with the storage de-
5 vice;

6 means for writing, by the first server, a set of data to a switch port memory of the
7 switch, the set of data including at least an identification of the storage device;

8 means for updating the set of data to include an indication of the change in state,in
9 response to the first server detecting a change in state of the storage device;

10 means alerting a second server of the plurality of servers that the contents of the
11 switch port memory have changed; and

12 means for reading the set of data from the switch port memory by a second server,
13 the second server thereby informed of the change in state of the storage device.

1 71. (Previously Presented): A computer readable medium containing executable pro-
2 gram instructions for distributing data in a network storage system, the executable pro-
3 gram instructions comprising program instructions adapted for:

4 associating a first server of the plurality of servers with the storage device;

5 writing, by the first server, a set of data to a switch port memory of the switch, the
6 set of data including at least an identification of the storage device;

7 in response to the first server detecting a change in state of the storage device,
8 updating the set of data to include an indication of the change in state;

9 alerting a second server of the plurality of servers that the contents of the switch
10 port memory have changed; and

11 in response to the alerting, reading the set of data from the switch port memory by
12 a second server, the second server thereby informed of the change in state of the storage
13 device.